

Art Unit: 2675

CLMPTO

August 14, 2001

LST 05/06/2005

Claims 1-15 (canceled)

16. A configurable add-drop multiplexing device for an optical wavelength division multiplex transmission system, comprising:

a group filter which divides an incoming WDM signal into a plurality of channel groups with channels of different wavelengths;

a plurality of exchangeable modules each of which connect to a respective channel group for connecting through and branching off channels;

the exchangeable modules comprising at least one of first, second, and third module types;

the first module type being for manual reconfiguration of connected-through and add-drop

Best Available Copy

Art Unit: 2675

Best Available Copy

channels with which longer-term connections of the channels of a channel group are realized;

the second module type being for remote configuration of channels to be connected through and add-drop channels of one of the channel groups with which short-term connections of the channels of the one channel group are realized;

the third module type being for closed connecting-through of a channel group; and

a combination filter to which reconfigured channel groups are fed and which forms an outgoing WDM signal.

17. The add-drop multiplexing device of claim 16 wherein the first module type comprises substantially a WDM demultiplexer, a manually configurable switching unit, and a WDM multiplexer.

18. The add-drop multiplexing device of claim 16 wherein the second module type comprises a WDM demultiplexer, a remote-configurable switching unit, and a WDM multiplexer.

19. The add-drop multiplexing device of claim 16 wherein the second module type comprises an add-drop-continue device with a series connection of at least one circulator, a tunable filter, and a coupling-in device.

20. The add-drop multiplexing device of claim 19 wherein the transmission loss of the tunable filter is adjustable.

Art Unit: 2675

21. The add-drop multiplexing device of claim 20 wherein the transmission loss of the tunable filter is thermally adjustable.

22. The add-drop multiplexing device of claim 16 wherein the third module type comprises an optical connecting cable.

23. The add-drop multiplexing device of claim 16 wherein there is provided a fourth module type which makes possible a remote configuration of drop-continue channels.

24. The add-drop multiplexing device of claim 23 wherein the fourth module type has a coupling device for coupling out at least part of the incoming WDM signal and a circulator and also at least one tunable filter.

25. The add-drop multiplexing device of claim 23 wherein the fourth module type has a coupling device for coupling out at least part of the incoming WDM signal, and at least one filter arrangement acting as a WDM demultiplexer for separating the coupled-out WDM signal into a plurality of channels of different wavelength.

26. The add-drop multiplexing device of claim 19 wherein narrow-band series-connected Bragg channel filters are provided which are tuned with regard to resonant wavelength, a stop band of which is so narrow that a filter tuned to a wavelength lying between the

Best Available Copy

Art Unit: 2675

channels significantly does not influence a function of adjacent channels.

27. The add-drop multiplexing device of claim 26 wherein the series connection of the tunable filters is terminated by an optical absorber into which non-reflected WDM signals are directed.

28. The add-drop multiplexing device of claim 24 wherein for coupling-out of a plurality of channels, a WDM demultiplexer is additionally provided designated at least for a number of the channels which corresponds to a number of the tunable filters.

29. The add-drop multiplexing device as claimed in claim 16 wherein the channels of at least one of the channel groups are adjacent in terms of frequency.

30. A wavelength division multiplex transmission system, comprising:

a plurality of add-drop multiplexing devices connected to one another via optical waveguides; and

each of the add-drop multiplexing devices comprising

a group filter which divides an incoming WDM signal into a plurality of channel groups with channels of different wavelengths,

a plurality of exchangeable modules each of which connects to a respective channel group for connecting through and branching off channels,

Best Available Copy

Art Unit: 2675

the exchangeable modules comprising at least one of first, second, and third module types, the first module type being for manual reconfiguration of connected-through and add-drop channels with which longer-term connections of the channels of a channel group are realized, the second module type being for remote configuration of channels to be connected through and add-drop channels of one of the channel groups with which short-term connections of the channels of the one channel group are realized, the third module type being for closed connecting-through of a channel group, and a combination filter to which reconfigured channel groups are fed and which forms an outgoing WDM signal.

31. A configurable add-drop multiplexing device for an optical wavelength division multiplex transmission system, comprising:

- a group unit which divides an incoming WDM signal into a plurality of channel groups;

- a plurality of exchangeable modules each of which connect to a respective channel group for connecting through and branching off channels;

- the exchangeable modules comprising at least one of first, second, and third module types;

- the first module type being for manual reconfiguration of connected-through and add-drop

Art Unit: 2675

channels with which longer-term connections of the channels of a channel group are realized;

the second module type being for remote configuration of channels to be connected through and add-drop channels of one of the channel groups with which short-term connections of the channels of the one channel group are realized;

the third module type being for closed connecting-through of a channel group; and

a combination unit to which reconfigured channel groups are fed and which forms an outgoing WDM signal.

---

Best Available Copy